

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-26. (Canceled)

27. (Previously Presented) A battery comprising:

a housing;

a positive terminal and a negative terminal;

at least one cell disposed within the housing and including at least one positive plate and at least one negative plate connected to the positive terminal and negative terminal, respectively; and

an electrolytic solution filling a volume between the positive and negative plates;

wherein the at least one positive plate further includes

a carbon foam current collector including a network of pores, and

a chemically active material disposed on the carbon foam current collector such that the chemically active material penetrates the network of pores.

28. (Original) The battery of claim 27, wherein the carbon foam current collector has a total porosity value of at least 60% and an open porosity value of at least 90%.

29. (Original) The battery of claim 27, wherein the carbon foam current collector has an electrical resistivity value of less than about 1 Ω -cm.

30. (Original) The battery of claim 27, wherein the carbon foam current collector includes graphite foam and has an electrical resistivity value of between about 100 $\mu\Omega$ -cm and about 2500 $\mu\Omega$ -cm.

31. (Original) The battery of claim 27, wherein the carbon foam current collector has a density of less than about 0.6 g/cm³.

32. (Currently Amended) The battery of claim 27, wherein the at least one negative plate further includes a carbon foam current collector including a network of pores[,] and a chemically active material disposed on the carbon foam current collector of the negative plate such that the chemically active material penetrates the network of pores.

33. (Original) The battery of claim 27, wherein the chemically active material includes a paste comprising an oxide of lead.

34. (Original) The battery of claim 27, wherein the chemically active material includes at least one of nickel hydroxide, cadmium hydroxide, lanthanum nickel, zinc hydroxide, and iron hydroxide.

Claim 35. (Canceled)

36. (Previously Presented) A battery comprising:

a housing;

a positive terminal and a negative terminal;

at least one cell disposed within the housing and including at least one positive plate and at least one negative plate connected to the positive terminal and negative terminal, respectively; and

an electrolytic solution filling a volume between the positive and negative plates;

wherein the at least one negative plate further includes:

a carbon foam current collector including a network of pores, and

a chemically active material disposed on the carbon foam current collector such that the chemically active material penetrates the network of pores.

37. (Previously Presented) The battery of claim 36, wherein the at least one positive plate includes a lead current collector.

38. (Previously Presented) The battery of claim 36, wherein the carbon foam current collector has a total porosity value of at least 60% and an open porosity value of at least 90%.

39. (Previously Presented) The battery of claim 36, wherein the carbon foam current collector has an electrical resistivity value of less than about 1 Ω -cm.

40. (Previously Presented) The battery of claim 36, wherein the carbon foam current collector has a density of less than about 0.6 g/cm³.

41. (Previously Presented) The battery of claim 36, wherein the chemically active material includes a paste comprising an oxide of lead.

42. (Previously Presented) The battery of claim 36, wherein the chemically active material includes at least one of nickel hydroxide, cadmium hydroxide, lanthanum nickel, zinc hydroxide, and iron hydroxide.

43. (New) The battery of claim 27, wherein the at least one negative plate includes lead.

44. (New) The battery of claim 27, wherein the chemically active material includes a paste comprising lead.

45. (New) The battery of claim 36, wherein the chemically active material includes a paste comprising lead.

46. (New) The battery of claim 27, wherein the carbon foam current collector includes graphite foam.

47. (New) The battery of claim 36, wherein the carbon foam current collector includes graphite foam.

48. (New) The battery of claim 27, wherein the carbon foam current collector includes carbonized wood.

49. (New) The battery of claim 36, wherein the carbon foam current collector includes carbonized wood.

50. (New) The battery of claim 27, wherein the carbon foam current collector includes graphitized wood.

51. (New) The battery of claim 36, wherein the carbon foam current collector includes graphitized wood.

52. (New) The battery of claim 36, wherein the carbon foam current collector includes graphite foam and has an electrical resistivity value of between about 100 $\mu\Omega$ -cm and about 2500 $\mu\Omega$ -cm.